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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/508,356	03/09/2000	Martin Greppmair	72.011	9745

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EXAMINER
ADDIE, RAYMOND W

ART UNIT	PAPER NUMBER
3671	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/508,356	Applicant(s) Greppmair
	Examiner Raymond Addie	Art Unit 3671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Feb 22, 2002*.

2a) ☒ This action is **FINAL.** 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-8* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *Aug 27, 2001* is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the damping bush of claim 4 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

2. The drawings are objected to because the word "figure" is misspelled in each figure; And the phrase --Prior Art-- is missing from figure 2. Correction is required.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the piston guide produced from plastic in 1 piece together with at least one damping bush must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Specification

4. The disclosure is objected to because of the following informalities:

The phrase "damping bush" should be --dampening bushing--.

Appropriate correction is required.

Claim Objections

5. Claims 4, 8 are objected to because of the following informalities:

the phrase "damping bush" should be --dampening bushing--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Linz # 3,756,735 in view of Darda # 3,957,309.

Linz discloses a vibration tamper comprising:

A working mass (5), which is driven in a tamping manner, via a crank mechanism (2, 3, 4, 6, 7, 8) and a spring mechanism (9, 10, 11).

A motor belonging to an upper mass (1) wherein the crank mechanism has at least one structural element (3, 4, 6) which is movable linearly back and forth. Said structural element (4) comprising a guide piston, element (3) comprises a connecting rod, element 6 comprising a piston guide. See col. 4, lines 11-65.

What Linz does not disclose is a connecting rod made of a material less dense than steel. However, Darda teaches an tamping device for breaking up rocks comprising an aluminum guide piston assembly (1), having an aluminum piston guide (18).
Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the vibration tamper of Linz, with an aluminum piston assembly, in order to reduce the dead weight of the tamper.

7. Claims 3/1, 3/2, 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Linz in view of Darda, as applied to claim 1 above, and further in view of Pauliukonis # 3,703,125. Linz in view of Darda disclose essentially all that is claimed, except for a plastic piston assembly.

However, Pauliukonis discloses an all plastic piston and cylinder assembly, including an integrally molded end closure, such as a damping bush (4). See Fig. 1; col. 2, lines 24-68. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the vibration tamper of Linz, in view of Darda, with a plastic cylinder assembly, as taught by Pauliukonis, in order to reduce the deadweight of the tamper.

8. Claims 5, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi # 5,261,762 in view of Walker et al. # 6134,779.

Yamaguchi discloses a tamping machine for soil compaction comprising:

A working mass (1) which is linearly reciprocal in a vertical disposition and made of a lightweight material.

A crank mechanism (4, 5).

A spring assembly (6), which works with said crank mechanism to drive said working mass (1) to reciprocate. The crank mechanism has at least 1 structural element (4, 5), which is a connecting rod, a piston pin a guide piston or piston guide.

What Yamaguchi does not disclose is making one of said structural elements from a material having a lower density than steel. However, Walker et al. teaches a high performance, forged aluminum connecting rod for use with internal combustion engines. See col. 1, lines 1-28. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the tamping machine of Yamaguchi, with a high performance, connecting rod, as taught by Walker et al. in order to prevent damage to a crank mechanism from damage from repeated compressive loads, as suggested by Walker et al., See Abstract.

9. Claims 5, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi # 5,261,762 in view of Hughes et al. # 4,905,540.

Yamaguchi discloses a tamping machine for soil compaction comprising:

A working mass (1) which is linearly reciprocal in a vertical disposition and made of a lightweight material.

A crank mechanism (4, 5).

A spring assembly (6), which works with said crank mechanism to drive said working mass (1) to reciprocate. The crank mechanism has at least 1 structural element (4, 5), which is a connecting rod, a piston pin a guide piston or piston guide.

What Yamaguchi does not disclose is making one of said structural elements from a material having a lower density than steel. However, Hughes et al. teaches a fiber reinforced plastic connecting rod for use in machines that convert rotary motion into reciprocating motion. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the tamping machine of Yamaguchi, with the connecting rod being made of lightweight materials, as taught by Hughes et al., in order to reduce energy loss by reducing the dead weight of a crank mechanism. See Hughes et al. col. 1, lines 1-28.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the tamping machine of Yamaguchi, with a high performance, connecting rod, as taught by Walker et al. in order to prevent damage to a crank mechanism from damage from repeated compressive loads, as suggested by Walker et al., See Abstract.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi in view of Hughes et al., as applied to claim 5 above, and further in view of Pauliukonis # 3,703,125.

Yamaguchi in view of Hughes et al. discloses essentially all that is claimed, to include the desirability of using lightweight materials. What Yamaguchi in view of Hughes et al. does not disclose is a one piece piston assembly. However, Pauliukonis teaches a 1 piece plastic or synthetic rubber piston assembly (2) comprising a piston guide 13 and at least 1 dampening bushing (5, 6, 8). Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the tamping machine of Yamaguchi in view of Hughes et al., with an all plastic piston assembly, as taught by Paulinkonis, in order to reduce the overall weight of said tamping machine as is suggested by Yamaguchi. See Paulinkonis col. 2, lines 24-65.

Response to Arguments

11. Applicant's arguments filed 8/27/2001 have been fully considered but they are not persuasive. The Applicant argues against the rejection of Claims 1 and 2 by stating "Darda would not have suggested modifying Linz...because Darda relates to a different type of device and makes different components from a lower density material than steel for a different reason that is not applicable to Linz.

However, Darda was not cited for teaching a tamping device, which is provided by the primary reference to Linz. Further the apparatus's of both references are of similar construction, except for the specific earth-working tool (26 Darda, 5/86 Linz); which is interchange able based on intended use of the reciprocating machine (both machines are cited as tamping devices in the respective references).

In response to applicant's argument that Darda makes different components from a lower density material than steel, for a different reason that is not applicable to Linz is not persuasive because: The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

In this case, Linz discloses all the structural features claimed, except for making certain features, such as a piston guide from a lightweight material. Darda was combined with Linz, in order to show the obviousness of reducing the weight of a piston guide (18), in order to increase the stability of the reciprocating unit.

Second the Applicant argues "Linz lacks a piston-cylinder assembly, and it is therefore unclear from Darda's teachings as to which if any components of Linz should be made from aluminum to obtain this result". However, Linz clearly discloses several piston-cylinder assemblies as illustrated in Figs. 3-6. Further, Darda clearly teaches providing a piston guide of aluminum in col. 4, lines 25-30, specifically for improving the mechanical stability of the tamping device. Therefore, the arguments are not persuasive and the rejection is upheld.

In regards to the rejection of Claims 3, 4 as being unpatentable over Linz in view of Darda and Pauliukonis; the Applicant argues "based on the above argument, (it) is believed (all claims) to be allowable. However, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Further, the Applicant argues "Pauliukonis does not disclose any particular use for the cylinder assembly and more importantly, does not disclose a piston rod of the type employed by the claimed invention or Linz...or that the use of any linearly movable components in a tamping machine would effectively reduce or eliminate the vibrations created in a machine having an oscillating mechanism".

However, none of the claims provide any limitation to reducing vibrations. Hence, the argument is moot. Further, because Pauliukonis does not specifically recite an intended use for the plastic actuating cylinder, the teaching is not limited to any specific intended use. The reference is seen to contemplate all uses in which comparable metallic actuating cylinders are used, to include "Jumping Jack" style tamping devices, as disclosed by Linz and Darda.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action.

In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Taylor # 4,738,339 discloses a plastic energy absorbing cylinder.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Addie whose telephone number is (703) 305-0135. The examiner can normally be reached on Mon-Fri from 6:30 am to 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Will, can be reached on (703) 308-3870. The fax phone number for this Group is (703) 305-3597.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1113.

Thomas B. Will
Supervisory Patent Examiner
Group 3600

RWA
3/27/2002